

Appl. No. 10/022,350
Amendment dated: August 25, 2003
Reply to OA of: May 27, 2003

REMARKS

Applicant acknowledges with appreciation the indication that claim 8 would be allowable if rewritten to overcome the rejection under 35 U.S.C. 112, second paragraph, set forth in this Office Action and to include all of the limitations of the base claim and any intervening claims. For the present time, applicant has not rewritten this claim in independent form since it is believed that the present amendment places the application in condition for allowance.

Applicant has amended the specification to provide the requested headings in the specification as requested in the Official Action.

Applicant has amended the claims to more particularly define the invention taking into consideration the outstanding Official Action and to overcome all of the outstanding rejections.

Claims 1, 7, 9-11, and 16 have been amended to clarify these claims and remove the objected to language, where appropriate. Claims 13-15 have been canceled from the application without prejudice or disclaimer. The claims now remaining in the application are claims 1-12 and 16. Applicant most respectfully submits that all the claims now present in the application are in full compliance with 35 U.S.C. §112 and are clearly patentable over the references of record.

The rejection of claims 1-9, 13, 14 and 16 under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention has been carefully considered but in view of the amendments to the claims and the cancellation of claims 13 and 14, it is believed that the rejection has been obviated and therefore it is most respectfully requested that this rejection be withdrawn.

The rejection of claims 10-12 and 15 under 35 U.S.C. 102(b) as being anticipated by Parker et al. has been carefully considered but in view of the amendments to claims 10 and 11 it is believed that this rejection has been obviated. Claims 10 and 11 have been respectively made directly or indirectly dependent on claim 1, which has not be

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included in the rejection. Accordingly, it is most respectfully requested that this aspect of the rejection be withdrawn. The cancellation of claim 15 obviates this aspect of the rejection. Accordingly, it is most respectfully requested that this rejection be withdrawn.

The rejections of claims 1-6 and 14 under 35 U.S.C. 103(a) as being unpatentable over Eide et al. and claims 7 and 9 as being unpatentable over Eide et al. as applied to claim 1 above, and further in view of Muma et al. and claims 13 and 16 in view of Parker et al. have been carefully considered but are most respectfully traversed.

Applicant wishes to direct the Examiner's attention to the basic requirements of a prima facie case of obviousness as set forth in the MPEP § 2143. This section states that to establish a prima facie case of obviousness, three basic criteria first must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine the reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations.

The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in applicant's disclosure. In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Section 2143.03 states that all claim limitations must be taught or suggested by the prior art. In re Royka, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). "All words in a claim must be considered in judging the patentability of that claim against the prior art." In re Wilson, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

The presently claimed invention relates to a bag splitter apparatus comprising a rotatable flail structure which comprises a plurality of flexible flails attached to a rotatable mounting. The flails are formed from a material having a Young's Modulus of less than 50 GN/m². As explained on page 2, lines 25-30, of the present application, the flails have a high degree of flexibility, in marked contrast to flails formed of steel wore rope.

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Typically, steel has a Young's Modulus of 190 to 210 GNm^{-1} and is, therefore, only flexible to a limited extent.

When the apparatus of the claimed invention is in use, the flails are rotated at high speeds. This causes the flexible flails to split the refuse bags in a whip-like cutting action. The cutting action is substantially the same as that employed by a trimmer for cutting grass. Thus, the flail structure of the claimed device must be capable of withstanding high speeds and high centrifugal forces. In fact, as the flails rotate, wind is generated; this can assist in the separation of heavy and light waste.

As noted by the Examiner, the apparatus of the Eide reference differs from that of the claimed invention because it does not employ flails that are formed from a material having a Young's Modulus of less than 50 GN/m^2 . Contrary to the Examiner's suggestions, however, it would not be obvious for a skilled person to incorporate this feature into the Eide apparatus, however, it would not be obvious for a skilled person to incorporate this feature into the Eide apparatus as a matter of routine. The prior art does not mention or suggest the use of flexible materials as flails. In fact, there is no mention of materials having Young's Moduli of less than 50 GN/m^2 . The prior art does not contain the necessary teaching to modify the primary reference to arrive at the claimed invention. In re Fritch, 23 USPQ 1780, 1784 (Fed Cir. 1992) ("It is impermissible to engage in hindsight reconstruction of the claimed invention, using the applicant's structure as a template and selecting elements from references to fill the gaps.).

Moreover, as explained below, a skilled person having regard to Eide would be led away from using such flexible materials. The Eide apparatus relies on the use of rigid steel cables to beat open the refuse bags. As can be seen from column 3, lines 16-19, the flails take the form of steep wire rope cables 1 inch in diameter. Preferably, these cables are formed by braiding multiple steel wires into ropes, and then braiding a plurality of these ropes into cable (see column 3, lines 19-21). This results in a rigid and unbending structure. As explained in column 5, lines 47-49, the cables cannot be bent in an arcuate manner.

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The inflexible nature of these cables is essentially to the way in which the Eide apparatus works. For example, as explained in column 4, lines 42-48, the flails of the Eide apparatus strike refuse bags in the manner that a bat hits a ball. Thus, it is the force of the impact that causes the bag to split, as opposed to a whip-like cutting action. As explained in column 5, lines 18-19, tubing (34) may be attached to the flails to accentuate the hammering action.

In view of the above, a skilled person reading Eide would regard the rigid nature of the flails to be an essential feature of the Eide apparatus. It is therefore not apparent why a skilled person would wish to use more flexible flails, as this would be perceived as being detrimental and contrary to the inventive concept behind the Eide invention. In fact, the Eide teaches away from the concept of cutting open the bags at column 4, lines 55-57. Accordingly, it is submitted that a skilled person would have no reason to use materials having the flexible characteristics of the claimed invention.

In view of the foregoing, it is submitted that the claimed invention possesses an inventive step in view of the Eide reference. Accordingly, it is most respectfully requested that the prior art rejections be withdrawn.

Applicant notes the preference for the arrangement of the headings in the specification as set forth in the Official Action. Applicant believes that the application contains all of the necessary information in an appropriate format. Titles have been added at the appropriate locations in the specification. However, the Examiner is authorized to make the necessary amendments to the specification by Examiner's Amendment if further changes are deemed to be necessary by the Examiner..

Applicant notes that this application was filed with formal drawings. It is believed that these drawings are acceptable. Applicant most respectfully requests that next Official Action confirm that the drawings filed with the application have been considered and are acceptable as formal drawings.

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In view of the above comments and further amendments to the specification and claims, favorable reconsideration and allowance of all of the claims now present in the application are most respectfully requested.

Respectfully submitted,

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